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Factor Markets in Russian Agriculture: Current Conditions and Policy Options

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Uneven farm growth

Significant changes are occurring in Russian agriculture. Input suppliers and other businesses are establishing vertically integrated or other contractual arrangements with agricultural producers in order to supply much-needed inputs. Even without fully developed landownership rights, rental transactions of farm acreage are becoming economically important. Household plots are becoming more common and show increases in output. Nonetheless, more than a decade after the initial reforms of the former Soviet economy, the results in agriculture remain disappointing. Output is about one-third below the pre-reform levels of 1989-91, and the incomes of workers employed in agriculture remain depressed.

BASIS researchers attempted to quantify the extent to which factor market constraints impaired the ability of Russian agriculture to function efficiently and profitably, and to identify the constraints that are most damaging in both the short and long run. Beginning with the premise that agricultural factor markets in Russia cannot be studied only on the basis of official statistical data, BASIS researchers carried out a survey covering agricultural land, labor, supply and use of purchased inputs, access to credit, and farm production. The survey was implemented between November 2002 and February 2003 in three Russian provinces with different climatic and political characteristics: Rostov, Nizhnii Novgorod, and Ivanovo. Researchers conducted face-to-face interviews with 202 operators of commercially-oriented household plots, 223 independent peasant farmers, and 142 managers of large corporate farms. Researchers also undertook several separate surveys of newly emerging large agricultural enterprises, rural households in a district in Ivanovo province, and machinery manufacturers and dealers. Through its analysis of the different organizational forms that exist in Russian agriculture, the research highlights several areas where policies can remedy the factor market constraints that keep Russian agriculture from being profitable and productive.

Variations in efficiency

Russian agriculture today is characterized by a wide spectrum of organizational forms. Small household plots and peasant farms (similar to Western-type family farms) coexist with large private corporate farms, giant agrofirms, and state farms inherited from the Soviet era. The huge variation in efficiency, in the sense of total factor productivity, from farm to farm in Russia is striking. For example, roughly half of corporate farms in the 2003 survey were near the efficiency frontier, while the other half fell well below it, with many getting an estimated 25% or less of the output that the efficient operations got from the same inputs.

Peasant farms have not fulfilled the expectation of becoming successful alternatives to the former collective farms. In the early 1990s, these farms grew to number about 250,000, but their expansion stopped there. Losses approach the level of annual sales, and

contributing factors include the absence both of institutional support and private property institutions in land. Analysis reveals a pattern of polarization in farm organization in Russia that might in itself serve to overcome some constraints to growth: many of the peasant farms tend to become smaller, approaching the operating mode of household plots, which produce mainly for the family's own consumption while selling a small fraction of the output to supplement income. For these farms, profit measures are meaningless, as their main function is subsistence. Conversely, the relatively large "entrepreneurial" farms in Russia have tended to evolve into business-oriented entities that must show a profit in order to survive.

The number of corporate farms declined relatively slowly, yet employment on them decreased substantially, with the labor force shrinking from 8 million in 1990 to about 4 million in 2002. The share of agricultural output in Russia's GDP also shrank, yet Russian policy continues to support the largest of these farms, ignoring the increasingly important role of small agricultural business. As a result, government support programs and subsidies have done virtually nothing to improve the efficiency of agriculture.

Large agroholdings have become a powerful but risky component of Russian agriculture. While many technically bankrupt former collective farms often still enjoy various producer privileges, many highly capitalized custom farming operators still are not officially considered agricultural producers and therefore are not eligible for farm support programs. Many of these agroholdings are forced to collateralize non-agricultural assets to support investment in agriculture, a process that diverts resources from the firm's core activities and exposes the entire organization to significant risks in the event of poor performance in the agricultural divisions.

Factors in productivity

The BASIS project investigated the emerging forms of land markets, constraints on efficient allocation and mobility of farm labor, input market imperfections, and coping strategies under constrained and disorganized farm credit and public financing systems. Some of the findings and policy suggestions in these areas follow.

Land market. The efficiency of corporate farms is not associated with land endowment. There is a high percentage of idle land, and the price of land is close to the expected value of marginal product. In order to intensify land use and prevent degradation of land quality, it is essential to encourage land redistribution from the least efficient to the most efficient users.

The main obstacles to development of a land market are low demand for agricultural land, limited access to market information, and bureaucratic complexity, which leads to high transactions costs. The emergence of the new agricultural operators, though, has created a demand for land by mobilizing outside capital. The new operators vertically integrate input supply, farm production, and marketing activities in order to bypass, or at least alleviate, many of the constraints in the land market (as well as credit and input markets). Some of these enterprises are huge, much larger than the traditional corporate farms, and this suggests that they may not be the long-term answer to Russia's agricultural problems. Yet, for the present, they are impressive in managing to overcome some of the constraints that afflict other forms of farming.

Labor market. The rural population has few employment opportunities outside of agriculture. Unemployment is held in check by reducing the effective working time and lowering wages. There has been a massive shift of labor from wage employment in corporate farms to subsistence and semi-commercial farming on household plots. Russian agriculture is thus characterized by extremely limited labor mobility and large-scale underutilization of labor, which only deepens rural poverty by creating an illusion of employment but without sufficient income.

Rural non-agricultural activities could be encouraged and expanded by restoring the normal functioning of social services, as well as by promoting entrepreneurship through credit facilities, tax breaks, and simplification of administrative requirements for small businesses. The large cohort of subsistence farmers that work their household plots as the main or sole occupation should be given the legal status of "economically employed," with all the associated rights for pension, medical insurance, unemployment benefits, and other forms of social protection. This will involve eliminating the sweeping tax exemption that household plot operators enjoy, but it will correct one of the major distortions between different categories of individual farms. Efforts should be made to raise the political conscience of the rural population so it can lobby for better wages and living standards. This may sound like a non-market mechanism, but political lobbying is a tool that all constituencies in developed market economies employ to achieve their goals.

Input market. Contrary to prevalent ideas regarding Russia's current input market imperfections, it appears that there is no shortage of material inputs (with the notable exception of fertilizer). Cash shortages are forcing farms to substitute land and labor—the two cheapest factors of production—for some purchased inputs, a process that inevitably leads to extensification of farm production, degradation of land quality, and abandonment of productivity-improving technologies. Although the government no longer delivers farm inputs, it has a strong negative influence on input markets through a wide range of federal and regional support programs. Government-sponsored leasing programs, with their restrictions of approved suppliers and models, create severe obstacles to the development of dealer networks. The cost-reimbursement policy for fertilizers only increased the demand for this input and encouraged the export-oriented manufacturers to raise prices in the domestic market. In regions characterized by lower levels of government intervention, there is significant growth of competitive trading in both machinery and fertilizers.

In fertilizer and fuel markets, pervasive monopolization, combined with high export demand, strengthens the bargaining power of input manufacturers and leads to overpricing. To correct this distortion, it is necessary to encourage deliveries to the domestic market. Input subsidies do not correct price distortions and sometimes aggravate them. Development of appropriate market institutions could increase the bargaining power of agricultural producers and at the same time lower the suppliers' risk in dealing with agricultural producers. The most obvious approach is through the creation of farmers' input-supply cooperatives capable of pooling the flows, reducing the risks, and possibly developing short-term credit schemes for input purchases.

Finance and credit market. Continuing government intervention in farm finances, often replicating the old centralized model, does not appear to have a significant impact on agriculture. Although subsidized interest-rate programs reduce the cost of borrowing and thus increase the demand for credit, administrative barriers, such as the regional quota system and the precondition of zero overdue debt, severely restrict the actual volumes of credit used under these programs. The marginal impact of government support programs requires careful rethinking of the role of government in agricultural finance. To be successful, Russian farms probably need fewer barriers to the proper functioning of market channels, not necessarily more support.

Farms with higher profitability have a higher probability of borrowing from financial institutions. This suggests that the Russian rural credit system, however limited and thin, behaves to a certain extent according to market principles. Yet, credit often has been an obstacle to economic change rather than a means of introducing it. The overwhelming bulk of government credit is granted to corporate farms, which often are unprofitable and maintain high debt levels because they have insufficient funds to pay the interest. Asset endowments, such as land and capital stock, have a very weak affect on the ability to borrow, which is probably a reflection of the low collaterizability of farm assets. Credit history does not impact a farm's ability to borrow, which may be because overdue debt is not an appropriate measure of credit history in an environment with pervasive soft budget constraints. It may also reflect the uncertainty surrounding the very notion of credit history in a transition economy, where owners and managers change rapidly and often. Under such circumstances, it may be better to use total indebtedness as a measure of solvency affecting access to credit. In general, BASIS findings caution against applying the conventional financial patterns of market economies to transition countries.

Finding the right policies for agriculture

The BASIS findings help in assessing the merits of often conflicting hypotheses about the causes of Russia's economic problems in agriculture. One hypothesis is that the withdrawal of the government-guaranteed bulk product markets after 1991 meant low prices for products relative to input costs, hence inevitable economic pressures. Just how salient low prices were is revealed in the reaction to the ruble devaluation in 1998, which substantially raised the ruble cost of imported agricultural commodities, increased the returns from exports, and improved the terms of trade between agricultural and non-traded goods and services. In short, it was a boon to agriculture and made many ventures of the "new economic operators" quite profitable. Even so, many corporate farms remained mired in losses and insolvency. Prices are not at the core of the problem.

Another hypothesis that the old institutional arrangements were too hastily dismantled. Liberalizing prices and ending product market guarantees and governmental supply of inputs, with prices calibrated to keeping farm enterprises going, undoubtedly hurt corporate farms. Yet, bringing back the market-economy equiva-

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Briefs

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lent of those policies, notably product and factor market subsidies, would not result in most of the corporate farms becoming profitable and would only foster continued high-cost production.

Perhaps the reforms of the early 1990s did not go far enough, and there is a need for an institutional mechanism that improves management decision-making and creates incentives for the poorly-performing farms. As noted, only half of corporate farms operate at the efficiency frontier. If reforms got the lower half of the farms into managerial hands of the quality of the upper half, Russian agricultural output could rise by 25% at no additional resource cost. Even if done over a decade, a 2.5% annual increase in total factor productivity growth would outstrip the performance of the Western agricultural economies during their periods of rapid technological change.

Would institutional changes foster such productivity growth? Encouraging private-sector input supply seems not to have worked because of bureaucratic restrictions and poor management of the subsidy programs. The BASIS work on marginal product estimation also casts doubt on the extent to which too little input supply is a source of inefficiency. As for the need for more complete and effective property rights in land, the impressive record of new economic operators and some other enterprises suggests that it is not necessary to wait for land-market reforms in order to attain substantial improvements. The lack of well-functioning credit markets also could be a major constraint, yet the evidence against marginal products of inputs generating value significantly above input costs suggests that even with well-functioning credit markets, the more salient issue would be the lack of prospects for profitable investment given the managements in place. A more productive credit reform might instead be to allow real bankruptcy and liquidation of nonperforming farm management.

While the policy implications of the BASIS research are not definitive, the work suggests that the preferred path to economic growth and prosperity in Russian agriculture is a generally liberal economic approach to markets, leaving scope for new management and organization forms to flourish or fail, with governmental efforts focusing on mitigating against some of the risks faced by agricultural investors. This could be achieved by amending the outdated mortgage and collateral legislation to introduce an efficient and enforceable system of grain warehouse receipts and legalized lien rights. Furthermore, launching collateral registration offices in rural areas would enable simplified out-of-court collection enforcement procedures. Government should also modify the crop insurance program to make it applicable to a wide range of agricultural investors. This might involve a shift from all-inclusive to specific risk coverage packages and a transition to investment-based valuation.

Suggested reading

The following outputs appear in Comparative Economic Studies*, March 2005, vol. 47, no. 1 <www.palgrave-journals.com/ces/journal/v47/n1/index.html>:*

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Grazhdaninova, Margarita and Zvi Lerman. “Allocative and Technical Efficiency of Corporate Farms in Russia,” 200-13.

Rylko, Dmitri and Robert W. Jolly. “Russia’s New Agricultural Operators: Their Emergence, Growth and Impact,” 115-26.

Sazonov, Sergei and Damira Sazonova. “Development of Peasant Farms in Central Russia,” 101-14.

Serova, Eugenia and Olga Shick. “Markets for Purchased Farm Inputs in Russia,” 154-66.

Shagaida, Natalya. “Agricultural Land Market in Russia: Living with Constraints,” 127-140.

Yastrebova, Olga. “Nonpayments, Bankruptcy and Government Support in Russian Agriculture,” 167-80.

Uzun, Vasilii. “Large and Small Business in Russian Agriculture: Adaptation to Market,” 85-100.